MJM Do. No. 5093-002

SEPARABLE MODULATOR

BACKGROUND

This application is a continuation-in-part of US Patent Application No. 10/078,282, filed February 19, 2002, which is a divisional of application No. 09/991,378 filed on November 21, 2001, which is a continuation of application No. 08/769,947 filed on December 19, 1996, now abandoned, which is a continuation-in-part of application No. 08/238,750 filed on May 5, 1994, now Patent No. 5,835,255, and ~~which~~ is a continuation in part of application No. 08/554,630 filed on November 6, 1995, now abandoned.

Spatial light modulators used for imaging applications come in many different forms. Transmissive liquid crystal device (LCD) modulators modulate light by controlling the twist and/or alignment of crystalline materials to block or pass light. Reflective spatial light modulators exploit various physical effects to control the amount of light reflected to the imaging surface. Examples of such reflective modulators include reflective LCDs, and digital micromirror devices (DMD™).

Another example of a spatial light modulator is an interferometric modulator that modulates light by interference, such as the iMoD™. The iMoD employs a cavity having at least one movable or deflectable wall. As the wall, typically comprised at least partly of metal, moves towards a front surface of the cavity, interference occurs that affects the color of light viewed at the front surface. The front surface is typically the surface where the image seen by the viewer appears, as the iMoD is a direct-view device.

Currently, iMoDs are constructed of membranes formed over supports, the supports defining individual mechanical elements that comprise the picture elements (pixels) of an image. In a monochrome display, such as a display that switches between